

## TWO-DIMENSIONAL SPECTRAL IMAGING SYSTEM

### ABSTRACT OF THE DISCLOSURE

Improved devices, systems, and methods for sensing and/or identifying signals from within a signal detection region are well-suited for identification of spectral codes. Large numbers of independently identifiable spectral codes can be generated by quite small bodies, and a plurality of such bodies or probes may be present within a detection region. Simultaneously imaging of identifiable spectra from throughout the detection region allows the probes to be identified. As the identifiable spectra can be treated as being generated from a point source within a much larger detection field, a prism, diffractive grading, holographic transmissive grading, or the like can spectrally disperse the images of the labels across a sensor surface. A CCD can identify the relative wavelengths of signals making up the spectra. Absolute signal wavelengths may be identified by determining positions of the labels, by an internal wavelength reference within the spectra, or the like.

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